UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,216	09/09/2003	Steen Bak Christensen	042390.P14656	5712

8791	7590	02/03/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN			NATALINI, JEFF WILLIAM	
12400 WILSHIRE BOULEVARD				
SEVENTH FLOOR			ART UNIT	PAPER NUMBER
LOS ANGELES, CA 90025-1030			2858	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/659,216	CHRISTENSEN, STEEN BAK
	Examiner	Art Unit
	Jeff Natalini	2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-25* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1,2,6-16 and 20-25* is/are rejected.

7) ☒ Claim(s) *3-5 and 17-19* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>09 September 2003</u> is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some *   c) ☐ None of:

       1. ☐ Certified copies of the priority documents have been received.

       2. ☐ Certified copies of the priority documents have been received in Application No. _____.

       3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/15/03</u>.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Specification

1.   Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because it is to short as it would not

be able to provide sufficient information relating to the invention to the reader.

Correction is required. See MPEP § 608.01(b).

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show

every feature of the invention specified in the claims. Therefore, (as claimed in claim 3

and 17) the 1st, 2nd, and 3rd clock sources must be shown as labeled as such (two clock

sources are shown in fig 2, but are not labeled source 1, source 2); also four of the

clock signals should be labeled first clock, second clock, etc...; deserializer (clms 3, 4,

17, and 18) is not shown any of the drawings or mentioned in the specification; (as

claimed in claim 4 and 18) a selector must be described as such in the specification and

drawling labels (it seems this is called a multiplexor in the specification); (as claime din

claim 5 and 19) the clock source should be claimed and labeled in the drawings as a

fourth clock source and the clock should be labeled in the drawlings as the fifth clock

signal must be shown or the feature(s) canceled from the claim(s). No new matter

should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended

replacement drawing sheet should include all of the figures appearing on the immediate

prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet,

and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering

of the remaining figures. The replacement sheet(s) should be labeled "Replacement

Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of

the drawing figures. If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Claim Objections

3.   Claims 3-5, 17-19, 24 and 25 are objected to because of the following

informalities:

- In regard to claims 3, 4, 17, and 18, deserializer must be given support in

    the specification in order to properly claim. Also in claims 3 and 17 (2nd

indentaion, a second clock source...) it is stated "either a fourth clock signal or an input data clock signal", if the input data clock signal is chosen for the comparison, the fourth clock signal will not have proper antecedent basis throughout the rest of the claim. Because claims 5 and 19 depend from these claims they are also objected to, and because of all the informalities these claims are not suited to be examined on their merits.

- Claim 24, refers to the part of "transmitting a test signal" in claim 22, wherein it comprises cleaning up the test signal when transferring it to the network, but later in claim 22, it is stated that the test signal is transferred with substantially no jitter correction, this contradicts the claim, as the test signal was already corrected. Will be examined as best understood.

- Claim 25 states "receiving the test signal using a 1-bit communication line", it is unclear if this is referring back to claim 22 that in receiving the test signal from the network a 1-bit line is used, or this signal is received from another source, also it seems the transferring the test signal with no jitter correction is repetitious from claim 22, there is no need to repeat this as it is stated in claim 22. Will be examined as best understood.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   Claims 22 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by

Cern (5815298).

In regard to claim 22, Cern discloses a method/system comprising: a first

transmitter (fig 1 (14) to transmit a test signal to a network (optical communication

network between the two stations A and B; abstract); a first receiver (12) to receive a

first signal from the network; a second receiver (12) to receive the test signal from the

network; transferring the test signal with substantially no jitter correction as a first signal

using a 1-bit communications line (signal is generated in test generator (18) and fed

through a 1-bit communication line (not specifically stated but signified by a skinny line

between 18 and 14 and known in the art communication can be done through a 1-bit

line- this explanation on a 1-bit line will not be repeated throughout the rejection);

cleaning up jitter in the first signal (amplitude detector (16), VCO (24), and PWM (20);

col 4 line 59 – col 5 line 5); providing the jitter cleaned up first signal as a second signal

to a network (transmitter (14) in station B provides the network with the signal (as seen

in figure 1)).

In regard to claim 24, wherein the transmitting the test signal to the network

comprises: substantially cleaning up jitter in an input signal (amplitude detector (16),

VCO (24), and PWM (20); col 4 line 59 – col 5 line 5); providing the jitter cleaned up first

signal as the test signal (transmitter (14) provides the network with the signal (as seen

in figure 1)).

Claim Rejections - 35 USC § 103

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

7.   Claims 1 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cern (5815298) in view of Girardeau, Jr. (6535567).

In regard to claim 1, Cern discloses all as stated above in the rejection of claim

22, and a second transmitter (fig 1 (14) in station B) to receive the test signal from the

second receiver (12) using a 1-bit communications line (the signal is transmitted through

detector (16), VCO (24), and PWM (20) to the transmitter, skinny line throughout).

Cern lacks specifically where jitter cleanup is done in the transmitter, instead

signal cleanup/altercation is done through the combination of 16 (detector), 24 (VCO),

and 20 (PWM).

Girardeau, Jr. teaches wherein a jitter suppression apparatus is supplied in a

transmitter (abstract).

It would have been obvious to one with ordinary skill in the art at the time the

invention was made for Cern to use a jitter suppression apparatus in the transmitter as

taught by Girardeau, Jr. in order to decode the phase error, compute the offset, and

filter out the offset (abstract).

In regard to claim 20, Cern discloses and optical network (abstract).

8.   Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cern and Girardeau, Jr. as applied to claim 1 above, and further in view of Wahl

(Publication 2003/0185325).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cern

(5815298) in view of Wahl (Publication 2003/0185325).

In regard to claim 2 and 23, Cern discloses a processor that is able to generate a

test signal (fig 1 (18)).

Cern lacks wherein the processor receives the first signal from the first receiver,

wherein the signal has no jitter correction, and the data processor is to determine path

integrity characteristics based on the test signal and the signal with no jitter correction.

Wahl teaches a comparator (256) that compares the test signal (208) to a non

corrected jitter signal (254) to determine the integrity of the communicated data

(paragraph 24).

It would have been obvious to one with ordinary skill in the art at the time the

invention was made for Cern to use in his processor/generator a comparator to

compare the test signal with a signal completely free of jitter as taught by Wahl in order

to test the integrity of the communication so as to produce a high/low signal notification

of the integrity (paragraph 24).

In regard to claim 6, Cern discloses an interface (fig 2 (labeled "network interface unit")) that is able to exchange signals with the processor/generator (18, they are connected through the switching unit and also could communicate through the transducer).

9.   Claims 7-9 and 13-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Cern, Girardeau, Jr., and Wahl as applied to claims 2 and 6 above, and further in view of Abidin et al. (2004/0100335).

Cern as modified lacks specifically stating the interface is compatible with XAUI, IEEE 1394, or PCI and the data processor is in compliance with IEEE 802.3, ITU-T G.709, or ITU-T G.975.

Abidin et al. teaches an interface compatible with XAUI (para 10), IEEE 1394 (para 11), and PCI (para 11) and a processor in compliance with IEEE 802.3 (para 10), ITU-T G.709 (para 10), and ITU-T G.975 (para 10).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Cern to have an interface compatible with XAUI, IEEE 1394, and PCI and the data processor in compliance with IEEE 802.3, ITU-T G.709, and ITU-T G.975, as taught by Abidin et al. in order to be compatible with standards set forth by the industry.

10.   Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Cern, Girardeau, Jr., and Wahl as applied to claim 6 above, and further in view of Bass

et al. (6449576).

Cern as modified lacks, whererin the interface is coupled to a switch fabric (claim

10), packet processor (claim 11), or memory device (claim 12).

Bass et al. teaches wherein the interface (fig 3 (305)) is coupled to a switch fabric

(313), packet processor (316), and memory device (308).

It would have been obvious to one with ordinary skill in the art at the time the

invention was made for Cern to couple a switch fabric to the interface as taught by Bass

et al. so that a port mirror of a structure can be utilized to monitor data traffic into and

out of network interface (col 6 line 54-62); couple a packet processor to the interface in

order to determine the destination of the packet (col 6 line 25-31); couple a memory

device to the interface to allow several media ports to receive frames or cells

simultaneously where the data is stored temporarily (col 6 line 22-28).

11.   Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cern

(5815298) and Girardeau, Jr. (6535567) as applied to claim 1 above, and further in view

of Creigh (6823483).

Cern as modified lacks wherein the network includes a gigabit Ethernet over

copper network.

Creigh teaches a network with a gigabit Ethernet (col 1 line 24-27) over copper

(col 1 line 60-64).

It would have been obvious to one with ordinary skill in the art at the time the

invention was made for Cerns network to comprise gigabit Ethernet over copper as

taught by Creigh in order to provide the most dominant technology for LANs (col 1 line

34-35).

12.   Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cern

and Girardeau, Jr. as applied to claim 1 above, and further in view of Searles et al.

(Publication 2004/0120406).

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cern

(5815298) in view of Searles et al. (Publication 2004/0120406).

In regard to claim Cern, receiving the test signal using a 1-bit communications

line (transmitter 14 receives test signal from generator 18); transferring the test signal

with no jitter correction (transmitter 14 to receiver 12 through the network).

Cern lacks specifically teaching wherein the first receiver receives the test signal

from the first transmitter using a 1-bit communications line and wherein the first receiver

is to transfer the test signal with no jitter to the data processor to determine integrity

characteristics based on the test signal.

Searles et al. teaches first receiver (fig 3C (200b1)) receives the test signal from

the first transmitter (100a1) using a 1-bit communications line (skinny line) and wherein

the first receiver is to transfer the test signal with no jitter (there is no mention of

correcting the original signal) to the data processor to determine integrity characteristics

based on the test signal (para 144; "processor will evaluate the performance or

performance characteristics of one pair").

It would have been obvious to one with ordinary skill in the art at the time the

invention was made for Cern to have a first receiver to transfer the test signal with no

jitter to the data processor to determine integrity characteristics based on the test signal

as taught by Searles et al. in order to determine performance of the links under various

test conditions (para 144).

Conclusion

13.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Chea (6823001) teaches communication between two

transceivers with a way to correct the signal being transmitted. Grivna (6539051)

teaches a transmitter within a communication network containing a phase locked loop

with a deserializer.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jeff Natalini whose telephone number is 571-272-2266.

The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Eddie Lefkowitz can be reached on 571-272-2180. The fax phone number

for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Jeff Natalini

EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800